Suspended Sediments of Taiwan Rivers and Their Geomorphological Significance

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Abstract

The paper is intended to study the suspended load of Taiwan rivers and its related features. Basic data from 49 drainage basins and 76 hydrological stations are used for the analysis and conclusions are drawn with the assistance of data interpretation as well as morphometry, field observation and statistical treatment. The discussion is emphasized on the basis of its geomorphological aspects, so that the intensity, magnitude, process, spatial variation and changes in time of sediment phenomena are studied in detail. Major topics of concern include: (1) amount of sediment content and sediment yield, (2) rate of physical denudation, (3) interrelationships between sediment and basin forms, (4) interrelationships between sediment and basin processes. Then, the sediment-discharge relationship is chosen as a topic of further discussion. It is found that this relationship in Taiwan conforms to the equation $C = aQ^b$. According to both a and b values, Taiwan watersheds can be classified into several types with different sediment-discharge relationship. They have areal differentiation so significant that when sediment problems are handled, such regional concept should not be neglected.

I. INTRODUCTION

Sediment problem is closely related to the concept of physical hydrology and thus sedimentation is a natural phenomenon. Fluvial sedimentation does not only reflect hydrological atributes, but also respond to the geomorphological,